

REMARKS

Claims 1-2, 4-5, 7-12 are pending in the present application, claims 10-12 having been withdrawn, and claim 3 having been cancelled without prejudice or disclaimer herein. The Office Action and cited references have been considered. Favorable reconsideration is respectfully requested.

By the present amendment, claims 1 and 10 have been amended, and claim 3 has been canceled. No new matter has been added. The amended matter of claims 1 and 10 is supported by specification and Drawing of the present application (see the shape of fine lattice patterns 210 of Figs 10d and 11h and original claim 3). Non-elected claims 10-12 have been withdrawn because the restriction requirement has been made final. However, because they are dependent claims, Applicant respectfully submits that their rejoinder, upon allowance of claim 1 from which they depend, is appropriate. Claim 10 has been amended herein so that it includes all of the limitations of the allowable product claim 1 from which it depends, as required by the rules of rejoinder.

Claim Rejection under 35 U.S.C. §103

Claims 1-9 were rejected under 35 U.S.C. §103 (a) as being unpatentable over U.S. Patent No. 4,963,498 (“Hillman”) in view of U.S. Patent No. 1,693,961 (“Risch”). The rejection is respectfully traversed for the following reasons.

The applicants respectfully disagree and submit that the presently claimed inventions as amended are completely different from Hillman and Risch.

1-1) Comparison with Hillman

Hillman discloses a capillary flow device including the receiving chamber (58), the reaction chamber (60) and effluent chamber (62). Hillman essentially includes a capillary pathway to flow a reagent from the receiving chamber to the effluent chamber. Hillman detects a flow characteristic by using the structure character of the capillary pathway and relates the flow characteristic to presence or amount of a fluid sample, that is, Hillman detects particles in a flowing state.

However, the present invention detects particles filled in the fill chamber, not in a flowing state, by using fine lattice patterns, which are formed in a predetermined place of the area of the fill chamber.

The Examiner, in the “response to arguments” section on page 2 of the office action, argues that the method of use of Hillman’s device, *i.e.*, detection of particles in the flowing state of the fluid, is not relevant because Hillman’s device allegedly teaches elements of the claimed invention, including the upper and lower substrates forming fill chambers. This misses the point of Applicant’s arguments. The uses of Hillman’s device are relevant to the obviousness of the combination. Since Hillman’s structure is designed to operate in a certain way, *i.e.*, to measure the number of particles in a flowing state of the fluid, one of ordinary skill in the art would not have been motivated to change the structure, according to the teachings of Risch, to include a feature that would allow counting of the particles in a fill chamber using a fine lattice pattern, as recited in the present claims.

Hillman detects a particle by using the detecting method different from the counting method of the present invention and Hillman does not need fine lattice patterns formed by positive grids embossed on the lower substrate for counting particles. Therefore, it would not have been obvious to combine the structure of Hillman and the grid patterns of Risch to one of ordinary skill in the art.

1-2) Comparison with Hillman

The device of Hillman consists of three layers, an upper sheet 52, a lower sheet 54 and a spacing sheet 56. (See Fig 2B and lines 41-42 of column 19 of Hillman).

However, the present invention is characterized in that the upper and lower substrates are directly bonded and thus form an integrated body, that is, the device of the present invention consists of two layers. A device that is comprised of two layers has effects to simplify the manufacturing process and thus to make mass production possible.

2) Comparison with Risch

Risch discloses merely negative grid patterns which are engraved. (See lines 64-65 of Risch, "This formation may consist, as illustrated, of concave surfaces").

However, the present invention is characterized in that the fine lattice patterns are positive grids which are embossed on the lower substrate. A device for counting cells having positive grids has effects that it is possible to counting cells exactly. Because positive grids ameliorate the problems that cells fall into the negative grids and that cells gather on the negative grids.

Risch discloses negative gratings (B) which are engraved, however, does not disclose positive grids which are embossed on the lower substrate. Therefore, the proposed combination, even assuming for the sake of argument only that one of ordinary skill in the art would have been motivated to combine the teachings as proposed without use of impermissible hindsight (which Applicant denies), would not have yielded the claim invention.

For at least these reasons, Applicant respectfully submits that claim 1 is allowable. Claims 2, and 4-5 and 7-9 are also allowable by virtue of their dependency from claim 1 and features recited therein. Withdrawal of the rejection under 35 U.S.C. §103 is therefore

respectfully requested. Because claims 10-12 depend from and include all of the limitations of claim 1, Applicant respectfully submits that they are patentable as well, and requests rejoinder.

Conclusion

For at least these reasons, Applicant respectfully submits that claims 1, 2, 4-5, and 7-12 are patentable over the prior art of record whether taken alone or in combination as proposed in the Office Action. If the Examiner is not persuaded, and intends to maintain this rejection, the Examiner is requested to contact the undersigned for a personal interview to advance prosecution before an office action is issued.

In view of the above amendment and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

If the Examiner has any questions, he is invited to contact the undersigned at 202-628-5197.

Respectfully submitted,

BROWDY AND NEIMARK, P.L.L.C.
Attorneys for Applicant(s)

By /Ronni S. Jillions/
Ronni S. Jillions
Registration No. 31,979

RSJ:HL
Telephone No.: (202) 628-5197
Facsimile No.: (202) 737-3528
G:\BN\K\Kime\Chang216\2009-09-28amendmentCHANG216.doc